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(FILE 'HOME' ENTERED AT 15:30:22 ON 30 APR 2004)

FILE 'STNGUIDE' ENTERED AT 15:30:28 ON 30 APR 2004

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INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 15:30:49 ON 30 APR 2004

SEA (CARBOMOYLASE AND AMINO ACID)

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1 FILE BIOTECHABS

1 FILE BIOTECHDS

SEA CARBOMOYLASE

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1 FILE BIOTECHABS

1 FILE BIOTECHDS

5 FILE DGENE

1 FILE PASCAL

L1

QUE CARBOMOYLASE

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FILE 'DGENE, BIOTECHDS, PASCAL' ENTERED AT 15:33:16 ON 30 APR 2004

L2

7 S L1

L3

7 DUP REM L2 (0 DUPLICATES REMOVED)

=> d l3 ibib ab 1-7

L3 ANSWER 1 OF 7 BIOTECHDS COPYRIGHT 2004 THOMSON DERWENT/ISI on STN  
ACCESSION NUMBER: 2001-06663 BIOTECHDS  
TITLE: Optimization of the immobilization parameters and operational stability of immobilized hydantoinase and L-N-carbamoylase from *Arthrobacter aurescens* for the production of optically pure L-amino acids;  
separate immobilization of dihydropyrimidinase and carbamoylase on Eupergit-C, Eupergit-C250L or EAH-Sepharose support and use for L-amino acid production  
AUTHOR: Ragnitz K; Syldatk C; \*Pietzsch M  
CORPORATE SOURCE: Univ.Stuttgart  
LOCATION: Institute of Biochemistry and Biotechnology, Spielmannstr. 7, 38106 Braunschweig, Germany.  
Email: m.pietzsch@tu-bs.de  
SOURCE: Enzyme Microb.Technol.; (2001) 28, 7-8, 713-20  
CODEN: EMTED2  
ISSN: 0141-0229  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB L-N-carbamoylase from *Arthrobacter aurescens* DSM 3747 and dihydropyrimidinase (hydantoinase, EC-3.5.2.2) from *A. aurescens* DSM 3745 were separately immobilized on Eupergit-C, Eupergit-C250L or EAH-Sepharose. The immobilization of wild-type, recombinant (expressed in *Escherichia coli* W3110 using plasmid pBW30 or plasmid pAW178-2) or hexahistidine-tagged enzymes was compared. For both enzymes, the use of recombinant proteins resulted in enhanced specific activities, especially when using a hydrophilic support such as EAH-Sepharose. Use of a hexahistidine affinity tail reduced activity by over 80%. In packed bed reactors, Eupergit C250-L (NH<sub>2</sub>)-immobilized hydantoinase and EAH-Sepharose-immobilized carbamoylase showed half-lives of approximately 14,000 and 900 hr, respectively. Specific activities were 2.5 and 10 U/mg wet support, respectively, sufficient to fulfil industrial requirements. The immobilized hydantoinase showed optimal activity at pH 8.5-10 and 45-60 deg, and the immobilized carbamoylase at pH 9.5 and 60 deg. The immobilized enzymes can be operated in a single reactor for the production of optically pure L-amino acids. (21 ref)

L3 ANSWER 2 OF 7 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS RESERVED. on STN  
ACCESSION NUMBER: 1988-0206072 PASCAL  
TITLE (IN ENGLISH): Enzymatic production of L-tryptophan from DL-5-indolylmethylhydantoin by *Flavobacterium* sp.  
AUTHOR: NISHIDA Y.; NAKAMICHI K.; NABE K.; TOSA T.  
CORPORATE SOURCE: Tanabe Seiyaku co. ltd., Yodogawa-ku Osaka 532, Japan  
SOURCE: Enzyme and microbial technology, (1987), 9(12), 721-725, 17 refs.  
ISSN: 0141-0229 CODEN: EMTED2  
DOCUMENT TYPE: Journal  
BIBLIOGRAPHIC LEVEL: Analytic  
COUNTRY: United Kingdom  
LANGUAGE: English  
AVAILABILITY: CNRS-18233

L3 ANSWER 3 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
ACCESSION NUMBER: ABB99396 Protein DGENE  
TITLE: New D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117, useful for preparing an enantiomerically concentrated amino acid -  
INVENTOR: Drauz K; May O; Bommarius A; Syldatk C; Altenbuchner J; Werner M; Siemann-Herzberg M  
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.  
PATENT INFO: WO 2002077212 A2 20021003

APPLICATION INFO: WO 2002-EP1840 20020221  
PRIORITY INFO: DE 2001-10114999 20010326  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2003-029934 [02]  
CROSS REFERENCES: N-PSDB: ABV72500  
DESCRIPTION: Amino acid sequence of D-**carbomoylase**.

AB The present sequence represents a D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 4 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
ACCESSION NUMBER: ABV72507 DNA DGENE  
TITLE: New D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117, useful for preparing an enantiomerically concentrated amino acid -  
INVENTOR: Drauz K; May O; Bommarius A; Sylatk C; Altenbuchner J; Werner M; Siemann-Herzberg M  
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.  
PATENT INFO: WO 2002077212 A2 20021003 49p  
APPLICATION INFO: WO 2002-EP1840 20020221  
PRIORITY INFO: DE 2001-10114999 20010326  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2003-029934 [02]  
DESCRIPTION: PCR primer used to amplify DNA encoding D-**carbomoylase**.

AB PCR primers ABV72505-07 were used to amplify DNA encoding D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117. The amplified sequence was cloned for recombinant expression of the enzyme. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 5 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
ACCESSION NUMBER: ABV72506 DNA DGENE  
TITLE: New D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117, useful for preparing an enantiomerically concentrated amino acid -  
INVENTOR: Drauz K; May O; Bommarius A; Sylatk C; Altenbuchner J; Werner M; Siemann-Herzberg M  
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.  
PATENT INFO: WO 2002077212 A2 20021003 49p  
APPLICATION INFO: WO 2002-EP1840 20020221  
PRIORITY INFO: DE 2001-10114999 20010326  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2003-029934 [02]  
DESCRIPTION: PCR primer used to amplify DNA encoding D-**carbomoylase**.

AB PCR primers ABV72505-07 were used to amplify DNA encoding D-Carbamoylase enzyme from *Arthrobacter crystallopoietes* DSM 20117. The amplified sequence was cloned for recombinant expression of the enzyme. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 6 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
ACCESSION NUMBER: ABV72505 DNA DGENE  
TITLE: New D-Carbamoylase enzyme from Arthrobacter crystallopoietes  
DSM 20117, useful for preparing an enantiomerically  
concentrated amino acid -  
INVENTOR: Drauz K; May O; Bommarius A; Sylatk C; Altenbuchner J;  
Werner M; Siemann-Herzberg M  
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.  
PATENT INFO: WO 2002077212 A2 20021003 49p  
APPLICATION INFO: WO 2002-EP1840 20020221  
PRIORITY INFO: DE 2001-10114999 20010326  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2003-029934 [02]  
DESCRIPTION: PCR primer used to amplify DNA encoding D-  
**carbomoylase**.

AB PCR primers ABV72505-07 were used to amplify DNA encoding D-Carbamoylase enzyme from Arthrobacter crystallopoietes DSM 20117. The amplified sequence was cloned for recombinant expression of the enzyme. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.

L3 ANSWER 7 OF 7 DGENE COPYRIGHT 2004 THOMSON DERWENT on STN  
ACCESSION NUMBER: ABV72500 DNA DGENE  
TITLE: New D-Carbamoylase enzyme from Arthrobacter crystallopoietes  
DSM 20117, useful for preparing an enantiomerically  
concentrated amino acid -  
INVENTOR: Drauz K; May O; Bommarius A; Sylatk C; Altenbuchner J;  
Werner M; Siemann-Herzberg M  
PATENT ASSIGNEE: (DEGS)DEGUSSA AG.  
PATENT INFO: WO 2002077212 A2 20021003 49p  
APPLICATION INFO: WO 2002-EP1840 20020221  
PRIORITY INFO: DE 2001-10114999 20010326  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2003-029934 [02]  
CROSS REFERENCES: P-PSDB: ABB99396  
DESCRIPTION: Nucleotide sequence of D-**carbomoylase**.

AB The present sequence encodes a D-Carbamoylase enzyme from Arthrobacter crystallopoietes DSM 20117. The D-Carbamoylase is useful for preparing an enantiomerically concentrated amino acid, where hydantoins are converted in the system hydantoinase/D-carbamoylase, optionally in the presence of a hydantoin racemase or an enzyme that is capable of racemization of carbamoylamino acids or for preparing enzymes modified by genetic engineering.